

REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the following remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections.

The present application is directed to an image processing apparatus and method. The method employs a hierarchical encoding which results in a bit stream of coded data of LL, 3HL, 3LH, 3HH, 2HL, 2LH, 2HH, 1HL, 1LH and 1HH for each encoded image. As explained in paragraphs [0044] and [0045] of the published application, the coded data of LL is all that is needed to be acquired in order to produce a 75 dpi version of the image, the coded data of LL, 3HL, 3LH and 3HH are needed for a 150 dpi version of the image, and so on. Of course, the coded data must be decoded before the image can be displayed. For example, the coded data of LL for an image must be acquired and then decoded before a 75 dpi version of that image can be displayed.

As further discussed in paragraphs [0063] through [0065] of the published application, when it is desired to first display only low resolution versions of a plurality of images, the apparatus acquires first only the low level data of each of the plurality of images, so that the low level data can be decoded and the low resolution versions of the images can be displayed while the rest of the coded data for the images is still being acquired. Then, during decoding of the data at the low level of hierarchical encoding for each of the plurality of images, the unit acquires data at higher levels of hierarchical encoding for each of the plurality of images.

Additionally, as discussed in paragraph [0048] of the published application, when all of the data of low resolution has been received, a display screen notifies a

user that an index print is possible. The user is then able to request an index print while higher level data is still being received and/or decoded. Should the user request an index print while higher level data is still being received and/or decoded, outputting of the index image occurs while the unit acquires data at higher levels of hierarchical encoding for each of the plurality of images.

Of course, the claimed invention is not limited to the disclosed embodiments.

Claim 1 is rejected as being unpatentable over U.S. Patent No. 5,267,052, hereinafter Bannai, in view of U.S. Patent No 4,261,018, hereinafter Knowlton.

In response, Claim 1 is amended to recite that the image processing apparatus includes an index maker which makes an index image of the plurality of images based on the data at the first level of hierarchical encoding on the plurality of images and a print engine which prints the index image received from said index maker, and that the image input controller receives data at a second level of hierarchical encoding for each of the plurality of images after data acquisition of the data at the first level of hierarchical encoding is completed and during outputting of the index image.

At the bottom of page six of the Office Action, the Examiner states that, in view of the disclosure in Fig. 4 and lines 23-32 of column 6 of Bannai, there "must exist" an index maker which makes an index image in Bannai. However, even assuming for the sake of discussion that some basis exists for this interpretation, Bannai clearly does not disclose that the image input controller receives data at a second level of hierarchical encoding for each of the plurality of images after data acquisition of the data at the first level of hierarchical encoding is completed and during outputting of the index image.

Moreover, Knowlton does not cure this deficiency in Bannai. Knowlton simply discloses successive image transfer of one progressive image from a low resolution to a high resolution.

Accordingly, neither Bannai nor Knowlton, alone or in combination, discloses, teaches or suggests an image processing apparatus having an image input controller which acquires coded data by an input interface first only at a first level of hierarchical encoding from an external recording medium over a plurality of images, an index maker which makes an index image of the plurality of images based on the data at the first level of hierarchical encoding on the plurality of images, and a print engine which prints the index image received from said index maker, wherein the image input controller receives data at a second level of hierarchical encoding for each of the plurality of images after data acquisition of the data at the first level of hierarchical encoding is completed, and during outputting of the index image, where the first level includes less resolution than the second level, in combination with the other features recited in amended Claim 1.

Claim 1 is therefore allowable over Bannai in view of Knowlton, and withdrawal of the rejection of Claim 1 is respectfully requested.

Independent Claims 9 and 15 are also allowable over the applied art. For example, Claims 9 and 15 are both amended to recite acquiring data at a second level of hierarchical encoding for each of the plurality of images after data acquisition of the data at the first level of hierarchical encoding is completed and during outputting of the index image. For reasons consistent with the above discussion of Claim 1, the applied art, alone or in combination, does not disclose, teach or suggest

this aspect of the method and computer readable recording medium recited in Claims 9 and 15.

The dependent claims are allowable at least by virtue of their dependence from allowable independent claims. The dependent claims also recite further distinguishing aspects of the apparatus, method, and computer readable recording medium at issue here. For example, Claim 25 recites a user interface which, after data acquisition of the data at the first level of hierarchical encoding is completed, notifies a user that an index image is possible, and Claims 26 and 27 recite, after data acquisition of the data at the first level of hierarchical encoding is completed, notifying a user that an index image is possible.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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